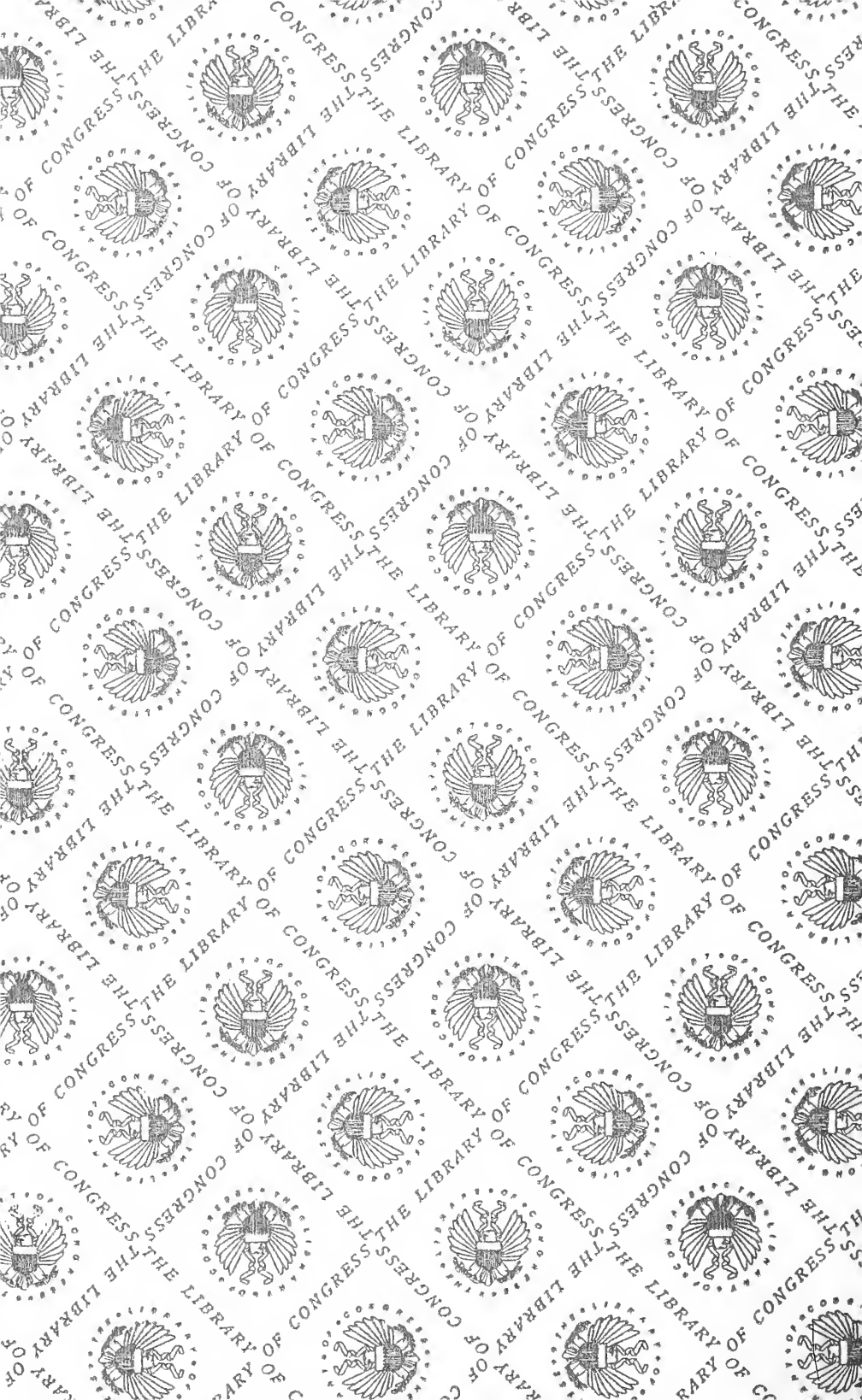

THE LIBRARY OF CONGRESS

The McShane Bell Foundry

Baltimore, Md.
U. S. A.

The McShane Bell Foundry,

(TRADE MARK.)

Henry McShane Manufacturing Co., Proprietors,

BALTIMORE, MD., U. S. A.

Manufacturers of

CHIMES AND PEALS

AND BELLS OF ALL SIZES

FOR

Churches, Fire Alarms,

Court House, Tower Clocks,

&c., &c.

Mounted in the most approved manner and fully warranted.

Office and Foundry:

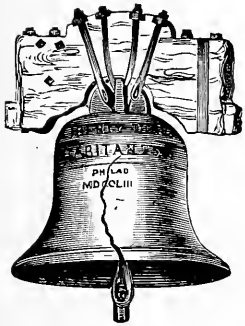
415 to 441 NORTH STREET,

Opposite Penna, R. R. Depot.

McShane Bell Foundry,

BALTIMORE, MD.

HENRY McSHANE MFG. CO., Proprietors.



In submitting our catalogue for your consideration, we trust it will aid you in making selection of what you may wish, either single Bell, Peal or Chime, and provide you the necessary information. The Bell business is not as generally understood as other trades, and questions will arise outside of the ordinary ones, such as weights, tones, mountings, means of transportation, and manner of hoisting into the tower, etc., etc.; therefore we trust you will not hesitate to ask for any information you may desire, assuring you no pains will be spared on our part to answer intelligently and promptly.

The mere mention of the McSHANE BELL is at once a guarantee of a Standard Bell in the fullest sense of the word. They have been recognized from the first as equal to the best ever produced, and this is the result of careful study and strict attention to musical measurements and accurate formulæ, coupled with experience and trial, extending over a period of nearly half a century.

Their unequalled success in this country fully attests their excellence in everything that goes to make up a THOROUGHLY GOOD BELL. The material of which they are composed is NEW INGOT COPPER AND IMPORTED BLOCK TIN, carefully proportioned

and as carefully melted, and we will agree to forfeit the price of any Bell we sell, if an authentic analysis shall disclose that it is composed of anything else but the BEST COPPER AND TIN.

We point with no little pride to the fact that we have made during our existence of nearly fifty years 28,000 single Bells, 400 Peals, 100 Chimes, in all over 30,000 Bells.

The question next in importance to the Bell is that of the MOUNTINGS, see description, and illustrations on various pages of this catalogue.

It will be seen therefrom that our mountings, when compared with those of other manufacture, are far superior in every respect. The Iron work is all cast in our own foundry, the mixture being of the best quality, calculated for the special work it has to do, and is of strong and substantial style, and so adapted as to secure the best possible results. The wood work is of first-class selected timber, and so joined as to produce the strongest kind of a frame in every instance, according to the necessities of the case. The combination of strength, utility, durability, proper equilibrium, ease in ringing, and neatness of design throughout is a prominent feature, and helps not a little to produce the satisfactory results common to our Bells. We refer with pleasure and satisfaction to every Bell we have made and sold. An equally efficient indication of the satisfaction our Bells are giving is the large demand for them, which is steadily growing larger year after year, and every sale is invariably certain to make another in the same town or vicinity; this we deem a thorough proof of the excellence of our Bells.

OUR ESTABLISHMENT IS UNRIVALLED IN ITS FACILITIES, and the number of Bells we make annually—which we stand ready to demonstrate—exceeds that of any other Bell Foundry in the country.

Our facilities and advantages enable us to sell Bells at very close figures, and we accordingly offer them at lowest price at which we can sell FIRST-CLASS FULLY WARRANTED WORK, and upon most liberal conditions.

Medals and awards for merit and excellence of workmanship and quality of material are undoubtedly a worthy criterion in forming your judgment, although some people denounce them mostly because they received few or none for their work. We have a large number of Medals and Awards, made and presented

to us by thoroughly competent and disinterested judges after carefully comparing our Bells with those from other Foundries, and they are such as afford us much pleasure, and to which we refer with pardonable pride.

All communications addressed to us as below, will receive prompt and careful attention.

Address,

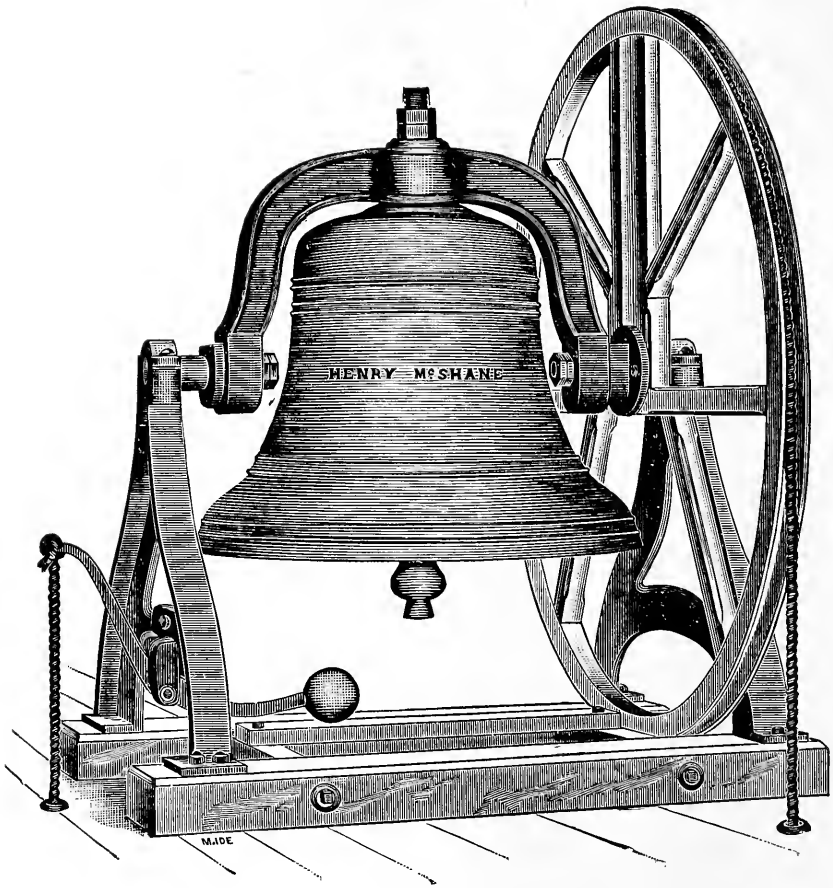
McSHANE BELL FOUNDRY,

HENRY McSHANE MFG. CO., Proprietors,

BALTIMORE, MD., U. S. A.

P. S. We have had these catalogues printed as an "emergency" pending the publishing of our new finely illustrated book, which will be ready in about three months. If in the meantime you do not decide the matter write us and we shall be pleased to send you a copy.

CHURCH BELLS.



CHURCH BELLS.

All our Bells are made of *New Superior Ingot Copper and the Best Imported Block Tin*—we make no other. And they possess all the qualities necessary to a good Bell, viz.: depth and richness of tone, prolongation of sound, durability, and workmanship. Every Bell is severely tested by ringing before leaving the foundry.

Ranging in weight from 1400 lbs. to 10,000 lbs., hung with *McShane's Improved Rotary Yoke,* which permits the Bell to be turned in the yoke at pleasure, so as to prevent the liability to break, a detached arm which secures ease in ringing, steel springs which hold the clapper from the Bell after it has been struck, and prolong and improve the sound, wooden frame and iron stands or uprights for supporting the Bell, wheel, tolling hammer, fitted in a clevis; all constituting the most complete, perfect and convenient fixtures for using the Bell under all circumstances yet devised. See illustrations.

Purchasers should always leave the tone to the Founder, because the range of tone variation is very limited, owing to the fact of the unvarying composition of Bell-metal and the shape of Bells.

Bells of the same size invariably have the same "*key*" or tone note; what variation there may be is within a quarter tone one way or the other, depending upon the pressure exerted in "sweeping" up the mould.

If a particular tone is wanted, then the only way to get it is to order a Bell of the size that invariably sounds that tone. See sizes and tones, page 8. Churches and others should not try to imitate some familiar Bell, except by selecting a Bell of same size or weight, as a bell of 1000 lbs. cannot be made to produce the same note as a 700 lb. Bell and vice versa. The same rule holds good in all similar circumstances as regards Bells.

The weight named in the following table indicates the pattern used in making that size Bell, but the Bell so made invariably *weighs from two to three per cent. more than the pattern.*

Larger size Bells made to order.

TABLE

Giving size, weight and tone of Church Bells,, and Cost of Mountings, as Cut on page 6.

BELL.			MOUNTINGS.		
WEIGHT.	TONE.	DIAMETER.	SIZE OF FRAME OUTSIDE	DIAMETER OF WHEEL.	PRICE OF MOUNTINGS.
1,400	F♯	40 inch.	4 ft. 11 inches	6 ft. 3 inches.	$60 00
1,500	F♯	41 "	4 " 11 "	6 " 3 "	60 00
1,600	F♯	42 "	5 " 4 "	6 " 3 "	70 00
1,800	F	44 "	5 " 4 "	6 " 3 "	80 00
2,000	E	46 "	5 " 8 "	7 "	90 00
2,200	E	48 "	5 " 8 "	7 "	100 00
2,500	E♭	50 "	6 " 1 "	7 "	100 00
2,800	E♭	52 "	6 " 1 "	7 " 6 "	110 00
3,000	D	54 "	6 " 8 "	7 " 6 "	120 00
3,400	C♯	56 "	6 " 8 "	7 " 6 "	130 00
3,600	C♯	57 "	7 "	7 " 6 "	140 00
4,200	C	59 "	7 "	8 "	140 00
5,000	B	62 "	7 " 6 "	8 "	160 00
5,500	B♭	64 "	7 " 6 "	8 "	160 00
6,200	A	66 "	7 " 6 "	8 " 6 "	180 00

COPY OF OUR GUARANTEE.

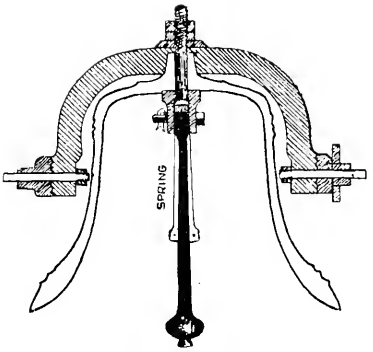
Attached to each Invoice for Bells of 100 pounds or over.

"The above mentioned Bell is WARRANTED to be of the best workmanship throughout, composed exclusively of BEST GRADE SUPERIOR NEW INGOT COPPER AND IMPORTED EAST INDIA BLOCK TIN, to be of good, clear tone, satisfactory to purchaser and not to crack by regular usage within TEN (10) YEARS from this date. Should it so crack within time specified and immediate notice be given us, we will give a new one of same size, quality and tone in FREE EXCHANGE for cracked one, the purchaser only to pay the FREIGHT CHARGES on cracked Bell and new Bell in exchange."

McSHANE'S

Rotary Yoke and Spring Clapper.

THE SIMPLEST AND BEST EVER USED.

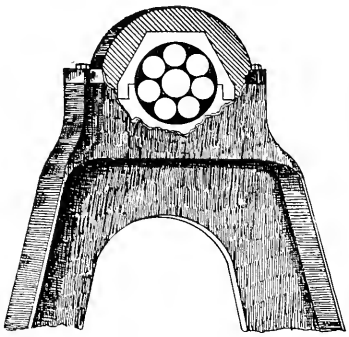


The great advantages arising from this invention and appliance are very obvious, as will appear by a little explanation. In the old method of hanging Bells, the clapper struck constantly in two places, on opposite sides of the bell, and in a direct line, so as eventually to cut into it, which result is only a question of time; whereas, by the use of the above yoke a man can change the blow of the clapper to any other point on the circumference of the Bell as often as desired leaving the Bell hung in the most perfect order, thus materially lessening the risk of breaking and increase the durability of the Bell beyond measure.

Bells of 100 pounds weight and upwards have springs attached to them, (see above illustration) to prevent the clapper from resting on the bell after the blow has been given. An exceedingly disagreeable, jarring sound is thus avaided, and the bell is enabled to give out a tone, full and clear. The noise, which the action of the clapper upon the bare spring would produce, is obviated by the use of leathers rivited upon the end of its arms. In case either arm of the spring at any time bends so near to the bell as not to prevent the rebound of the clapper, it can be forced a little further out by inserting a bar between it and the side of the bell.

McSHANE'S

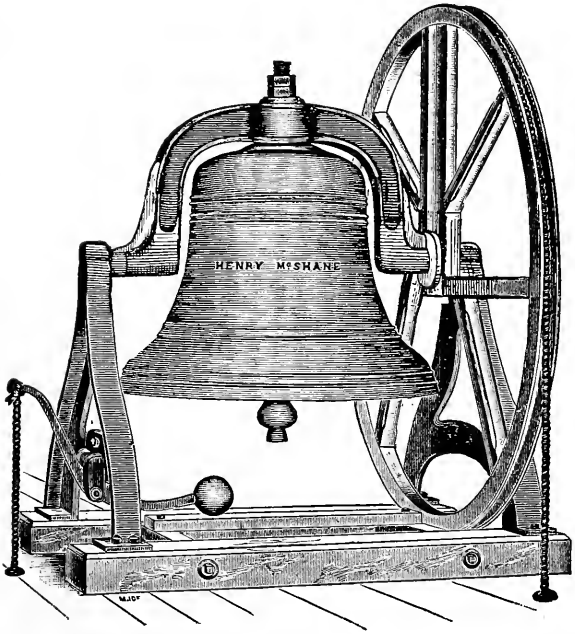
Improved Friction Rollers and Tolling Hammer.



Attached to all large Bells of 1,400 lbs. and over, to lessen the labor of ringing (see illustration). These rollers are far superior to those used by any other manufacturer. Those used by others are composed of *two* rollers, with the journal of the yoke on the top. In a very short time the journals cut into the two rollers and become wedged between them, the rollers fail to revolve and the Bell rings harder than without the rollers. It will be seen by the illustrations that our friction rollers are all around the journal and as the Bell is swung they revolve around the journal. Any mechanic will inform you that the *McShane Rollers are the best.*

We furnish a Tolling Hammer, fitted in a clevis attached to Iron Stand, as is shown in cut, with all Bells of 300 lbs. and upwards, and is a very desirable means of tolling a Bell at funerals; also for Fire Alarm purpose when desired. The Tolling Hammer should never be used while the Bell is being rung, but should be left at rest and the rope hung aside securely, so that no one can thoughtlessly pull it, as the consequence would be the probable breaking off of the Tolling Hammer or even throwing the Bell off its mountings.

CHURCH BELLS.



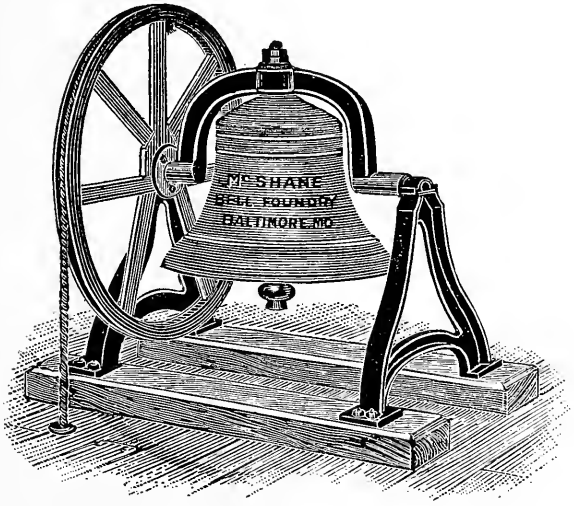
TABLE

Giving size, weight and tone of Church Bells, and Cost of Mountings. As Cut on Page 11.

BELL.			MOUNTINGS.		
WEIGHT.	TONE.	DIAMETER.	SIZE OF FRAME OUTSIDE.	DIAMETER OF WHEEL.	PRICE OF MOUNTINGS.
300	D	25 inch.	3 feet 4 in.	2 feet 10 in.	$23 00
350	C♯	26 "	3 " 4 "	3 " 6 "	25 00
400	C♯	27 "	3 " 4 "	3 " 6 "	28 00
450	C♯	28 "	4 "	4 " 4 "	30 00
500	C	29 "	4 "	4 " 4 "	32 00
550	C	30 "	4 "	4 " 4 "	35 00
600	B	31 "	4 "	4 " 4 "	35 00
650	B	32 "	4 " 5 "	4 " 4 "	35 00
700	B♭	33 "	4 " 5 "	4 " 9 "	40 00
750	B♭	33 "	4 " 5 "	4 " 9 "	40 00
800	A	34 "	4 " 5 "	4 " 9 "	40 00
900	A	35 "	4 " 5 "	4 " 9 "	45 00
1,000	A♭	36 "	4 " 9 "	5 " 6 "	45 00
1,100	G♯	37 "	4 " 9 "	5 " 6 "	45 00
1,200	G	38 "	4 " 9 "	5 " 6 "	50 00
1,300	G	39 "	4 "11 "	5 " 6 "	50 00

These Bells mounted as per the Cut on page 11, are identically the same as those ranging in weight 1400 pounds up, except they are not furnished with the Friction Rollers, everything else is the same.

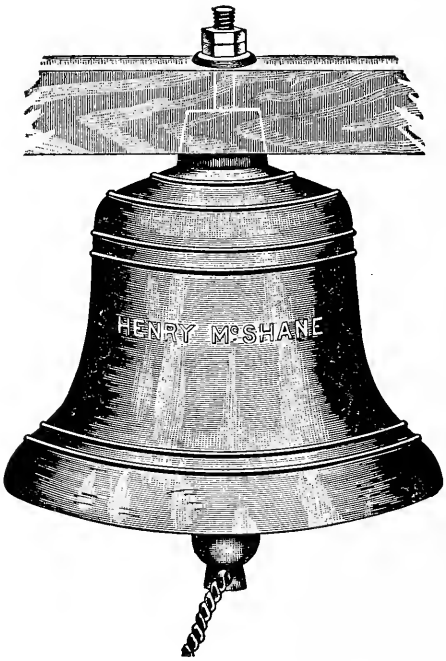
Chapel and School Bells.

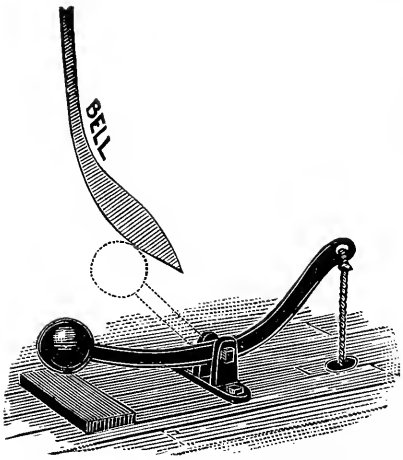


BELL.			MOUNTINGS.		
WEIGHT.		DIAMETER.	SIZE OF FRAME OUTSIDE.	DIAMETER OF WHEEL.	PRICE OF MOUNTINGS.
100	A	17 inches.	2 feet 1 in.	2 feet.	$13 00
125	G	18 "	2 " 7 "	2 "	13 00
150	F♯	20 "	2 " 10 "	2 "	15 00
175	F	21 "	3 "	2 "	18 00
200	E	22 "	3 "	2 "	20 00
225	D♯	23 "	3 "	2 "	20 00
250	D♯	24 "	3 " 2 "	2 " 10 in.	23 00

These Bells are supplied with all our improved Mountings except Tolling Hammer and Friction Rollers.

FIRE ALARM BELLS.





Fire Alarm Bells.

Our Fire Bells are the best in the world. They are constructed so as to produce a different tone from the Bells we sell for Church purposes. We make these of any desired weight from 100 lbs. to 10,000. The foregoing cut will give you an idea as to how Bells for this purpose are usually arranged, especially where they are to be used in connection with either an automatic or electric striker; and in smaller towns and on occasions where the alarm is struck by hand, the Bells are suspended stationary as said cut, and struck by the clapper to which a rope is attached; or by means of a tolling striker. (See the lower cut.)

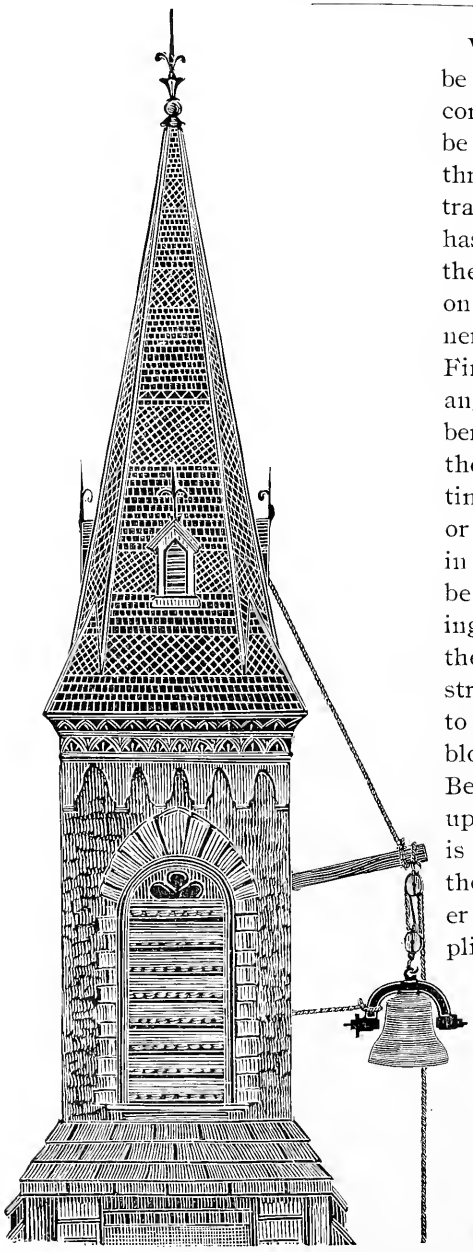
Again, when the Bells are to be swung so as to arouse the Fire Company, we usually furnish them with the regular Church Bell Mountings, and in that case the Alarm can be struck by use of the tolling-hammer.

In the larger Cities, a very large Bell is usually erected either in the City Hall, or Court House, and small Bells in each of the Engine Houses; in villages and moderate size towns there is usually but one Bell, and the weight of that depends upon the size and population of the town.

Court House and Clock Bells.

These Bells are usually patterned on the same lines as our Fire Bells, and erected in the same manner, except in cases of Clock Chimes, and they are arranged in a frame similar to our regular Church Chimes, and in accordance with the shape and size of the tower. We make these Bells of any weight and in any combination of tones. Further information on this subject will be freely given upon application.

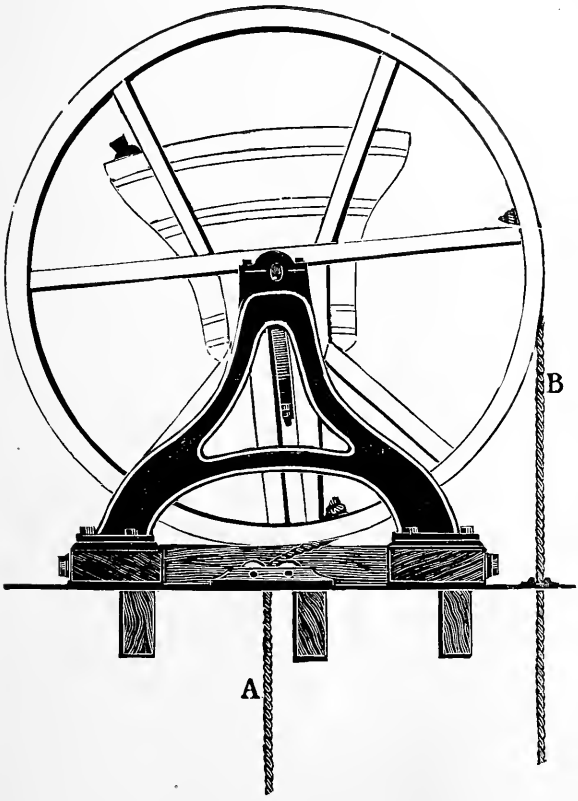
DIRECTIONS FOR RAISING, RINGING, &c.



Whenever it can possibly be done, towers should be so constructed that the Bell can be hoisted to the Belfry through the inside through traps of proper size; if Belfry has not been so arranged, then the Bell may be raised on the outside, in the manner shown in illustration. First, project at an elevated angle a suitable piece of timber with a tackle attached to the end, securely fastening timber so that it cannot move or be drawn out of position in the hoisting. If it cannot be readily drawn up by passing the rope down through the tower, then run the rope straight down from the tackle to a properly fastened "snatch block" then if it be a heavy Bell it can readily be drawn up by one or two horses. It is not well to use horses, though, unless sufficient power cannot otherwise be applied In case of very heavy Bells, a "capstan" or a "windlass" will be found the best substitute for any team of horses. The frame and wheel should always be taken up first; the frame properly placed on a firm level bearing; the wheel also be made ready

to attach. Then when the Bell is drawn up into the Belfry, the wheel can be attached, and Bell lowered into place in the frame.

If necessary, the iron stands may be taken off the wood frame and taken up separately. Should it be impracticable to set Bell in the frame at once, when hoisted, it may, if a new purchase with the tackle cannot be conveniently rigged, be raised from Bell Room floor by levers and blocking, care being taken not to break out its edges in using iron bars. In bolting on the wheel to the yoke, place it so that the bolt holes correspond to each other and also place the wheel upon the opposite side of the frame to that to which the tolling hammer is attached.



After the Bell is mounted, brace the stands firmly sidewise, either to the floor or the sides of the tower, so as to prevent their becoming broken by any accidental side strain. THE BELL AND ITS MOUNTINGS SHOULD BE EXAMINED FROM TIME TO TIME to see if the several nuts are properly screwed up, and the other parts are in order; and oil should be placed upon the bearings as often as required, but not in sufficient quantity to allow of its dripping and accumulating upon the Bell, to the consequent injury of its tone.

When putting in the clapper, see that it be put in as we

mark it, so that it fits as originally adjusted, and see that the pin which goes through the clapper be properly oiled to allow it to swing freely; also see that the key be well put into the pin and the open ends be well spread open, so that it cannot come out.

The rope may be attached, as shown in illustration. In case of Bells up to 1500 pounds, the rope should be attached as at A, and run around the wheel and down through the sheaves or rollers directly under the centre of the wheel. In this way, even if by some enthusiastic ringer, the Bell should be overturned, it will not matter, because the rope running up the other side will still remain in working order. In the case of Bells over 1500 pounds weight, there is not much danger of the Bell being overturned, hence the rope is attached at B and around over the top of wheel, then directly down to the ringer. The use of a stop is more injurious than beneficial, because if Bell be heavily pulled, as it is more or less likely to be, then it strikes the stop with a vigorous thump, causing a greater jar to the tower than any vigorous ringing of the Bell will otherwise produce, besides very forcibly injuring the mountings.

The ropes for ringing Bells should be no thicker than necessary to secure sufficient strength and yet remain pliable and comfortable to grasp in the hand, hence the proper size rope for ringing Bells is as follows:

For tolling Hammer, the rope should be from three-eighths to one-half inch thick, according to weight.

For Bells under 600 pounds.....½ inch diameter.
" " from 700 to 1000 " .....⅝ " "
" " " 1200 to 1800 ", ...¾ " "
" " " 2000 pounds upwards..... 1 " "

HOW FAR CAN BELLS BE HEARD?

No positive rule will serve to give reliable information on this question. Two-thirds of the efficiency of a Bell depends entirely on the proper arrangement of the Tower and Belfry. The only rule we can give is that by which the Belfry and Tower should be arranged. That is the Tower should be conveniently "roomy," but not too large. One foot (each side) space between Bell frame and Belfry wall or inner side is a *plenty of room*, and it should not be larger. For Bells under 1,000 lbs. in weight the Belfry should not be more than from 5 to 6½ feet square by from 5½ to 6½ feet from Bell deck or floor to ceiling. The Tower should be high enough to bring the Belfry or Bell room several feet above any other portion of the church building.

This rule is a very good one for all churches and other towers under ordinary conditions, except in closely built cities where the towers must be built higher to accomplish the object for which Bells are put in them.

Bell rooms for Chimes or Peals of Bells should be especially constructed and arranged, and we cheerfully supply any needed information on this subject upon application. All Bell rooms should have a tight closed floor, and a tightly closed ceiling. The side openings or windows should always reach clear from floor to ceiling, and be well opened so that the sound may have full and free egress. To illustrate the question, the following from the "*Scientific American*" of November 8, 1879—is a very good explanation.

H. B. H. asks—"What size and what weight should a Bell be to be heard at three miles distance, or say in radius, counting on the wind? The height at which the Bell will be situated will be about 45 feet from the ground. The city has a radius of three miles from the tower where the Bell will be located. Also taking into consideration that the mean temperature is from 84° to 92° Fah.

ANSWER—"It is impossible for us to give any information on this subject that would be reliable. In fully half of the cases it depends upon the formation of the land surrounding the building in which the Bell is to be placed. In a hilly locality, a Bell will not be heard half as far as if the land were level or nearly so. A Bell will be heard a great deal farther lengthways of a valley than over the hills at the sides. It is frequently the case too, that towers have small windows, or openings, with the lower boards so close together as to almost box up the sound. In cities, the noise of steam and horse cars, manufacturing establishments, carriages and carts rattling over pavements, etc., is so great, that Bells are not expected to be heard at any considerable distance, and this is the reason why, in all cities several Bells are used for fire alarm purposes, it being impossible for one Bell, no matter how large it may be, to be heard above the thousand and one noises incident to every large place. The largest Bell ever made in this country weighed 22,000 pounds and before it was fractured, hung on the City Hall, in New York. One one or two occasions this Bell was heard up the Hudson River thirteen miles, in the night, when the city was comparatively quiet. Water is a good conductor of sound and aided materially in making the Bell heard as above mentioned. It is a great mistake to suppose that Bells can be heard in proportion to their weight; that is, that a Bell of 2,000 pounds will be heard twice as far as one of 1,000. This is not so, for the reason that the larger Bell does not possess anything like twice the resonant surface of the smaller one. What is gained and admired in the larger Bell is its deep, majestic, dignified tone, which is impossible to secure in the smaller one, the weight of a Bell invariably governing its tone. A Bell of 100 or 200 pounds in an open belfry on a school house or factory in the country, is frequently heard at a long distance, out of all proportion, apparently, to one of 1,000 pounds in a church tower, near by; and instances of this kind frequently cause no little comment in the way of comparison. The reason for this is, that the small Bell has a sharp, shrill, penetrating sound, that must, of necessity, be heard a great deal farther in proportion to its weight than the low, mellow, 'church going' sound of the Church Bell. The same principle applies to the whistle of a locomotive, and it is heard a long distance simply because its tone is shrill and penetrating. When hung stationary and struck or tolled, Bells will not be heard, as a rule, half as far as when swung. The swinging motion throws the mouth of the Bell up, and not only carries the sound off, but imparts to it a richness that is always absent when the Bell is at rest and struck. A great deal is to be gained by ringing a Bell properly, throwing the mouth well up, and not lazily jingling it. It is not physical strength that is required in ringing a Bell so much as 'getting the knack' of catching the rope just right, particularly on the second 'pull down.' The windows in the tower should be as open as possible, and the tower should be ceiled just above the windows."

A good deal also depends upon the ringer, as he should not lazily jingle the Bell, but swing the mouth well up, and it requires some patient practice before the art of ringing a Bell

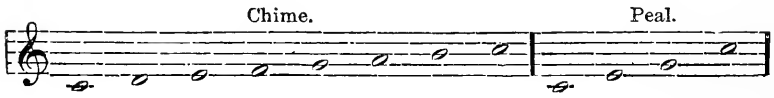
properly is acquired. Actual physical strength does not play as great part in it as getting the right knack of making each down-pull at the right instant. In other words, the ringer must become familiar with the exact sweep of the rope which his Bell makes before he can ring the Bell regularly and evenly so that it sends forth its full rich sound. Whoever the ringer may be he should do *all the ringing*, especially in the case of a new Bell, so as to quickly get accustomed to it.

Another evil with parties is "*jumping at conclusions*." Sometimes parties complain that they "can't hear the Bell far enough; sounds as though it lacked power and volume, although the tone is good and pleasant, and very much liked." The trouble in such cases, nine times out of ten, is that there is no ceiling, and windows not properly opened. In the other the Bell is put three or four feet below the windows, and a large trap beneath the Bell left open, &c., &c. Everything should be properly arranged *first* before the Bell is tried, as in almost every case, after the necessary improvements are made, the result is a wonderful change in the volume of sound of the Bell. The first impression lasts the longest, hence any trial of a Bell without first making every proper arrangement for its successful working is likely to cause a bad impression, which is extremely difficult to overcome, because so many people seem to think that suggestions to re-arrange the Belfry are merely made to draw attention away from the Bell. Hence all care should be taken with the Belfry before the Bell is put in, and full and proper arrangements made. Much more might be said on this very important subject, but we deem the foregoing sufficient to enable purchasers to locate the greatest part of the trouble when a Bell does not appear to sound "loud enough."

Chimes and Peals.

Many persons use these words interchangeably as though there were no difference. In England and throughout Great Britain the word "Peal" is used for almost any number of Bells in a set. It is the result of the custom of simply striking changes on the Bells in the old English style, where it required a ringer to each Bell, who was for the time being known and addressed only by the note his Bell represented. That was called "pealing the bells."

In this country any set of *five or more* Bells is called a "*chime*," although strictly speaking a chime consists of eight or more Bells. The number of Bells is only limited by the decrease in weight and consequent shrillness of tone compared with the large Bells. Thus, a chime is generally said to consist of eight Bells, attuned to the eight notes of the octave, or diatonic scales.



In almost all cases, one or two Bells are added so as to increase the usefulness of the chime. The two added are a *flat seventh*, and one above the octave, thus making the set consist of ten Bells.

The increase of the cost is not so much, while the usefulness of the set is wonderfully enhanced. The number may be increased indefinitely, but it is not well to go beyond the realm of pleasing sounds, as the Bells then are so small as to sound shrill and piping beside the large ones of the set.

When a Chime of exceptional completeness is desired, the number of Bells may be increased to twelve or fifteen Bells; by inserting a *sharp* fourth and adding another above the scale or set

of ten, the number is twelve. To make it fifteen, a *sharp* eighth is inserted, and two more above the twelve are added, thus making a set of Bells that is fully equal to meet almost every reasonable desire and upon which music of a very high order can be rendered with utmost satisfaction and excellence. To secure a Chime of twelve or more Bells necessitates Bells of slightly heavier weight than those usually considered as ordinary weight, else the upper notes are too shrill in comparison with the larger ones of the set, and are in that case to all appearances, of a different grade of sound. The want of such a system is painfully apparent in many existing rings, in unequally weighted rings, some of the Bells being much more powerful than others, and the quality of their tones very different, the weaker ones can scarcely be distinguished and the effect of the whole when rung is far from melodious and pleasing. We are always pleased to give every desired information to those contemplating the purchase of a Chime of Bells, and therefore cordially invite correspondence on the subject.

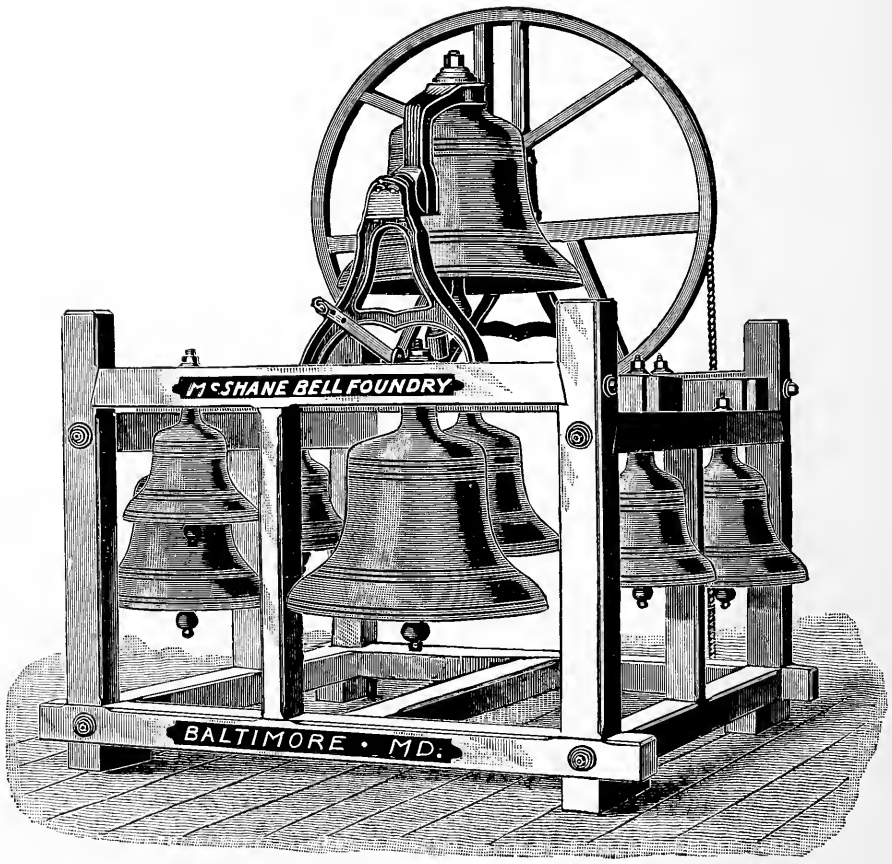
The usual way of mounting our Chimes is to provide the largest Bell with full mountings, (as in regular single Church Bells), placed on the top of the Chime frame. In this way you can ring it apart from the Chime for special services, if desired. See illustration, page 24.

The remaining Bells are suspended in the wooden frame, stationary, and the frame work arranged especially to suit the tower in which they are to be placed. The Bell-room of towers for Chimes should always be as elevated as possible and thoroughly well arranged. The windows large and well open, reaching clear from floor to ceiling.

Our lever-ringing chiming stand is beyond doubt the handsomest and best adapted instrument of its kind in existence, and enables the chimer to perform any music within the range of the Bells in a manner, securing the best results and most satisfactory effect.

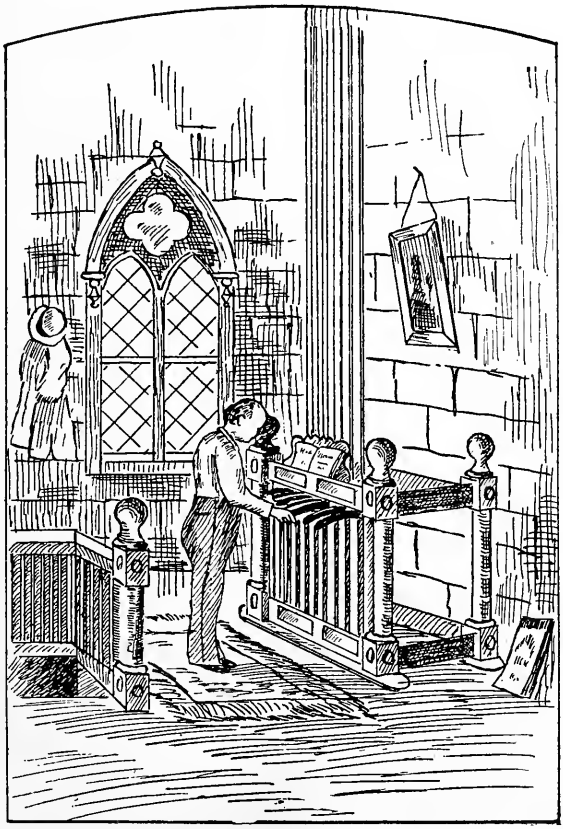
Our method of connecting the levers with the clappers is also a most perfect one, as it secures a most excellent elasticity of touch and effect, and enables the chimer to bring out *pp* as pleasing and satisfactory as *fff*, thus securing musical execution unequalled by any other method. To ring or play a chime of Bells does not require the services of a professional musician

CHIME IN ITS FRAME



IN BELL CHAMBER OF TOWER.

VIEW OF THE CHIMING APPARATUS



FURNISHED WITH ALL CHIMES.

absolutely as any gentleman of ordinary musical ability can with comparatively little careful practice, soon acquire a very skillful performance.

Of course, where a skillful or professional musician can be had as readily as any other, a better rendition of the music is secured, and less trouble is experienced in attaining competency in the ringer.

Now, a Peal is simply a chord usually representing the 1st, 3d and 5th tones of a given key, and when the Bells are very heavy the 8th note is added; the effect of the Peal is very pretty. Of course tunes cannot be played on them, but the changes, and the different tones following one after the other, is very effective. The Bells are usually arranged with complete mountings, as regular Church Bells. There are also Peals known as "Westminster Peals"; these are also four in number, and take the lower note in a specified key, or the 1st, 4th, 5th and 6th tones. These Bells are usually arranged with a tower clock, and the changes struck are known as the "Oxford Changes."

Sometimes these Peals are arranged with Mountings complete for the large Bell only, and the other three suspended stationary in a frame specially constructed; then the changes are struck by means of a lever-playing stand, as a regular Chime is played. Of course tunes cannot be played on such Bells, since there must be at least eight Bells for that purpose.

Parties purchasing a Bell who contemplate adding later on one or more Bells, would do well to so specify in the order, so that we may keep a record of the first Bell and be in position to afterwards add any number of Bells in tune with the first one.

As Bell sound is not like tune-fork sounds, threfore tune-forks are not always reliable to tune a Bell by. *We have a more accurate method which cannot produce discord.*

Parties desiring to purchase a Chime or Peal of Bells, should give size of Bell Room or Belfry in the clear inside, also the height of Belfry from floor to ceiling, and the size of windows and their position in relation to the Belfry. Again, the amount of money intended to be invested should also be stated, as we can then know better what scale of music to offer to meet the want. Our manner of grading Bells in Chimes and Peals to be in *tone and tune* is entirely different from that of any other Founders; we furnish Chimes thereby in more perfect harmony without any

aberation of the surface of Bells, thus giving each Bell, its perfect tone and chords in itself. This is a serious point in a Chime of Bells, and should be fully considered and chosen, even though the Chime be more costly for this reason. Two to four months is usually required to produce such a Chime of Bells. We will be glad to furnish estimates for musical Bells free of charge, to churches or parties desiring to procure them, and give any information concerning same.

THE CENTENNNIAL CHIMES

——FROM——

THE McSHANE BELL FOUNDRY.

Our space will not permit of our giving a full detail of all the Chimes and Peals we have made, and will have to content ourselves with a full description of "*The Centennial*" or the first Chime of Bells Cast in Maryland. We will not use our own words, but those of *The Philadelphia Commercial.*

"Of the many interesting features at the Centennial Exhibition, none did attract more attention or give more real pleasure to the great multitude that visited Philadelphia, than the music from the Chime of Bells exhibited by the McShane Bell Foundry of Baltimore. It was the only Chime in the whole exhibition, and was composed of thirteen bells, representing the thirteen original States of the Union, and was without exception, the most creditable "exhibit from that City." These Bells are all large, the smallest weighing about 300 lbs. and the largest upwards of 4,000 lbs. The thirteen aggregating over 21,000 lbs. They comprise a full octave and one-third with a *flat* seventh and a *sharp* fourth, and possess clearness, richness of tone and great volume of sound, and are constructed in the most admirable and substantial manner. The Bells were hung in the main tower, on the northeast angle of Machinery Hall, near the main entrance (Belmont Avenue) to the exhibition grounds. This was the first Chime of Bells ever cast in the State of Maryland, and were in charge of a famous Chime ringer, who is a thorough musician, and who has achieved a reputation of being one of the finest "Chimers" in the world. Under the sway of his skillful hand, as soft or high the sweet Chimes did ring out the grand and noble "Doxology," and the thrilling notes of the "Star Spangled Banner," the soul-stirring strain of "Yankee Doodle," echoing through the vales and woodlands, the floral dells and sylvan groves, and re-echo from the hill-tops, and from

the rocks and umbrageous shores of the placid Schuylkill, causing the multitudes assembled in Philadelphia's famous Fairmount Park, to pause, stand transfixed and mute, enraptured by the "Music of the Bells."

The Bells were hung in a heavy oaken frame, with the largest of the thirteen Bells in the centre and are, by the aid of the music rack, attached by ropes and adjustable straps, rendering manipulation remarkably easy. The Chime was cast expressly for exhibition at the Centennial, at a cost of over $10,000, and was one of the most pleasing of the many attractions there, and was no doubt the most costly "exhibit" made by any single firm in the world, and without exception, are the finest Chime of Bells ever cast in this country. On the opening day, May 10th, they were rung at sunrise. On that day, at nine o'clock A. M., when the representatives of the nations of the earth had gathered together, and the officials high in position of our own country had met to formally open the exhibition, which after several years of arduous labor and anxiety has thus far been crowned with success, the Chimes from the McShane Bell Foundry, of Baltimore, were the first to proclaim the glad tidings, ringing out in clear, resonant tones the joyous news to the world.

The Bells from this well-known establishment excel in volume of sound and richness of tone, and superior workmanship. A peculiarity of the Bells of the McShane Bell Foundry is the attention given to musical laws in the tone of them; even the largest size, some 15,000 pounds, sounding exactly the note for which it was cast. All Bells cast at this foundry are made of genuine Bell Metal, composed of Lake Superior copper and government banca tin, and are so modelled as to secure that proportion between the diameter, height and thickness, as shall produce the desired acoustic effect in the highest degree. In this particular these Bells are unequalled, all their patterns being made from mathematical formula, which they have deducted from the results of a long course of study and forty years experience, and every Bell made by them is a card of recommendation whenever seen, and in each and every instance has given the greatest satisfaction to the purchasers. This establishment turns out more Bells than any other foundry in the United States, and such is their reputation, and the large and growing demand made for their Bells, that ere long they will be heard ringing commen-

dations of the McShane Bell Foundry in every city and town on this continent.

The establishment of Henry McShane & Co. is one of the largest and best equipped in the country, and possesses every facility for the Production of Bells of every description, such as Church Bells, Fire Alarm, Chimes, Court House, Academy and Factory Bells, Ship, Steamboat, Plantation and Farm Bells, all of which are made in the best manner, and strictly first-class in each and every particular. A specialty being made of Chimes and Peals of Bells of any number, in perfect tune and accord with each other, and arranged to be played by one person upon levers, so that any one able to read music can play tunes upon them. The fame of this foundry and the reputation of their Bells is world-wide. As an evidence of this, it is only necessary to cite the fact that this firm has recently shipped one of their celebrated Bells to Foo-Chow, China. The members of the firm are Henry and John McShane, who are thorough practical business men understanding the art of Bell making in every detail, and the costly Chime of musical Bells which they have placed in the great tower of Machinery Hall is an evidence of the interest they have taken in the "Centennial." The Chimes ring out morning, noon and evening over the hum of the busy crowds."—*Philadelphia Commercial.*

CHIMES.

We take pleasure in herewith handing you a list (showing the number of Bells, their weight and the key) of noted Chimes we have furnished within the past few years.

A Chime of 10 Bells

PLACED IN

St. Paul's Church,

Key West, Fla.

In the Key of F, with Flat 7th.

1800 F
1200 G
800 A
700 B♭
500 C
400 D
300 E♭
275 E
250 F
200 G

A Chime of 15 Bells

PLACED IN

St. Alphonsus' Church,

Baltimore, Md.

In the Keys of *D*♭, *E*♭, *F*.

3800 D♭
2500 E♭
1800 F
1500 G♭
1230 G
1000 A♭
850 A
700 B♭
600 B
500 C
450 D♭
410 D
350 E♭
320 E
250 F

A Chime of 12 Bells

PLACED IN

St. Mary's Church,

Delaware, Ohio.

In the Key of *E*♭, with Flat 7th.

2659 E♭
1846 F
1222 G
1000 A♭
680 B♭
526 C
465 D♭
350 D
329 E♭
264 F
208 G
128 A♭

A Chime of 13 Bells

PLACED IN

St. Lawrence's Church,

New Bedford, Mass.

In the Keys of *D* and *E*, with Flat 7th.

3000 D
2100 E
1560 F♯
1250 G
1050 G♯
850 A
630 B
500 C
400 C♯
380 D
260 D♯
180 E
150 F♯

A Chime of 20 Bells

PLACED IN

St. James' Church,

Chicago, Ill.

In the Key of *B*.

5101 B
4149 C
3673 C♯
3063 D
2583 D♯
2084 E
1741 F
1460 F♯
1191 G
974 G♯
832 A
687 A♯
646 B
529 C
465 C♯
309 D
256 D♯
200 E
192 F
153 F♯

A Chime of 13 Bells

PLACED IN

M. E. Church,

Camden, N. J.

In the Key of *D*.

3023 D
2087 E
1495 F♯
1195 G
984 G♯
701 A
664 A♯
628 B
512 C
475 C♯
323 D
187 E
158 F

A Chime of 8 Bells

PLACED IN

St. Stanislaus' Church,

Pittsburgh, Pa.

In the Key of *E*♭ with Flat 7th.

2500 E♭
1800 F
1200 G
1000 A♭
750 B♭
550 C
400 D
300 E♭

A Chime of 9 Bells

PLACED IN

Trinity Reformed Church,

Tamauqua, Pa.

In the Key of *F* with Flat 7th.

1653 F
1157 G
774 A
647 B♭
505 C
363 D
321E♭
267 E
198 F

A Chime of 9 Bells

PLACED IN

Trinity P. E. Church,

Covington, Ky.

In the Key of *F*, with Flat 7th.

1800 F
1200 G
800 A
700 B♭
530 C
350 D
250 E♭
225 E
200 F

A Chime of 10 Bells

PLACED IN

Trivett Memorial Church,

Exeter, Ont., Canada.

In the Key of *F*, with Flat 7th.

1800 F
1200 G
900 A
800 B♭
650 C
460 D
400 E♭
360 E
300 F
200 G

A Chime of 10 Bells

PLACED IN

5th Street M. E. Church,

Wilmington, N. C.

In the Key of *E*♭ with Flat 7th.

2500 E♭
1700 F
1200 G
1000 A♭
800 B♭
650 C
500 D♭
400 D
300 E♭
275 F

A Chime of 10 Bells

PLACED IN

Holy Trinity Church,

West Chester, Pa.

In the Key of *E*, with Flat 7th.

2000 E
1500 E♯
1050 G♯
850 A
650 B
450 C♯
350 D
300 D♯
260 E
180 F♯

A Chime of 10 Bells

PLACED IN

Trinity Cathedral,

Omaha, Neb.

In the Key of *D*, with Flat 7th.

3067 D
2035 E
1444 F♯
1197 G
854 A
632 B
522 C
384 C♯
364 D
294 E

A Chime of 11 Bells

PLACED IN

St. Michael's and All Angel's Church,

Anniston, Ala.

In the Key of *C*, with Sharp 4th and Flat 7th.

4300 C
3000 D
2500 E
1800 F
1550 F♯
1300 G
850 A
650 B♭
600 B
550 C
275 D

A Chime of 10 Bells

PLACED IN

St. Anne's Church,

Detroit, Mich.

In the Key of *E*, with Flat 7th.

2100 E
1550 F♯
1050 G♯
850 A
650 B
500 C♯
350 D
300 D♯
225 E
200 F♯

A Chime of 10 Bells

PLACED IN

St. Mary's Church,

Gloucester, N. J.

In the Key of *D*, Diminished 7th.

3000 D
2000 E
1500 F♯
1170 G
700 A
650 B
500 C
400 C♯
300 D
175 E

A Chime of 11 Bells

PLACED IN

St. Peter's Church,

Danbury, Conn.

In the Key of C♯.

3600 C♯
2600 D♯
1800 E♯
1500 F♯
1300 G
1100 G♯
750 A♯
650 B
450 C♯
250 D♯
175 E♯

A Chime of 10 Bells

PLACED IN

St. John's Church,

Utica, N. Y.

In the Key of *D*, with Flat 7th.

3039 D
2004 E
1513 F♯
1169 G
828 A
602 B
510 C
447 C♯
316 D
174 E

A Chime of 10 Bells

PLACED IN

Evang. Ref. Church,

Frederich, Md.

In the Key of *E*, with Flat 7th

2114 E
1493 F♯
985 G♯
826 A
662 B
466 C♯
318 D
261 D♯
193 E
161 F♯

A Chime of 10 Bells

PLACED IN

St. Luke's Church,

Westboro, Mass.

In the Key of E, with Flat 7th.

2096 E
1511 F♯
992 G♯
823 A
627 B
463 C♯
318 D
265 D♯
189 E
160 F♯

A Chime of 10 Bells

PLACED IN

Trinity Church,

Detroit, Mich.

In the Key of *E*, with Flat 7th.

2055 E
1494 F♯
982 G♯
819 A
615 B
473 C♯
314 D
262 D♯
178 E
161 F♯

A Chime of 10 Bells

PLACED IN

St. Mary's P. E. Church,

Wayne, Pa.

In the Key of *E*, with Flat 7th.

2100 E
1550 F♯
1050 G♯
850 A
650 B
475 C♯
350 D
300 D♯
250 E
200 F♯

A Chime of 11 Bells

PLACED IN

St. Paul's Church,

Des Moines, Iowa.

In the Key of *E*♭, with Sharp 4th and Flat 7th.

2660 E♭
1850 F
1250 G
1050 A♭
850 A
850 B♭
550 C
400 D♭
350 D
300 E♭
200 F

A Chime of 13 Bells

PLACED IN

St. Mary's Star of the Sea Church,

Brooklyn, N. Y.

Keys of *C*♯, *D*♯ and *F*.

3600 C♯
2500 D♯
1800 E♯
1500 F♯
1200 G
1000 G♯
800 A
700 A♯
600 B
500 B♯
450 C♯
350 D♯
250 E♯

A Chime of 11 Bells

PLACED IN

St. Lawrence Church,

Portland, Maine.

In the Key of *E*♭, with Sharp 4th and Flat 7th.

2500 E♭
1850 F
1250 G
1050 A♭
850 A
750 B♭
500 C
400 D♭
350 D
250 E♭
200 F

A Chime of 11 Bells

PLACED IN

Cathedral of Immaculate Conception

Kansas City, Mo,

In Key of *C* Natural, with Sharp 4th and Flat 7th.

4200 C
3100 D
2100 E
1850 F
1550 F♯
1250 G
850 A
750 B♭
650 B
550 C
350 D

A Chime of 10 Bells

PLACED IN

Memorial Chapel,

McDonough, Md.

In the Key of F, with Sharp 4th and Flat 7th.

1850 F
1250 G
850 A
750 B♭
650 B
550 C
350 D
275 E♭
250 E
200 F

A Chime of 9 Bells

PLACED IN

Trinity Church,

Rochester, N. Y.

In the Key of *F* with Flat 7th.

1800 F
1250 G
890 A
800 B♭
640 C
500 D
430 E♭
330 E
250 F

A Chime of 10 Bells

PLACED IN

St. Patrick's Church,

Elizabethport, N. J.

In the Key of *C*♯, with Flat 7th.

3850 C♯
2650 D♯
1850 E♯
1550 F♯
1050 G♯
750 A♯
650 B
550 B♯
475 C♯
250 D♯

A Chime of 10 Bells

PLACED IN

1st U. B. Church,

Chambersburg, Pa.

In the Key of *E*, with Flat 7th.

2100 E
1550 F♯
1050 G♯
850 A
650 B
475 C♯
350 D
300 D♯
225 E
200 F♯

PEALS.

Herewith we hand you a list showing the number of Bells, their weight and key of noted Peals in prominent Churches that we have furnished within the past few years.

St. James' Church,

Baltimore, Md.

5065 B
3397 C♯
2641 D♯
2082 E

St. Andrew's Church,

Allegheny, Pa.

3000 D
1600 F♯
850 A

St. Felix's Church,

Wabash, Minn.

2500 E♭
1200 G
700 B♭

Evang. Luth. Salems Church,

Detroit, Mich.

1800 F
1300 G
800 A

St. Mary's Church,

Claremont, N. H.

2000 E♭
1500 F♯
1000 G♯

Church of the Assumption,

Lancaster, N. Y.

1500 F♯
1000 G♯
750 A♯

St. Denis' Church,

Versailles, Ohio.

1500 F♯
750 A♯
430 C♯

St. Joseph's Church,

Providence, R. I.

1200 G
800 A
600 B
500 C

Carnegie Free Library,

Allegheny, Pa.

2000 E♭
1200 G
550 C

St. Joseph's Church,

Erie, Pa.

2500 E♭2
1200 G
700 B♭2
350 D

St. Anne de Bellevorie,

Montreal, Canada.

1800 F
1200 G
800 A

St. Stephen's Church,

Bradshaw, Md.

2090 E
1020 G♯
620 B

St. Vincent de Paul,

Montreal, Canada.

2500 E♭
1800 F
1300 G

St. Michael's Church,

Baltimore, Md.

4300 C
2200 E
1850 F
1300 G
900 A

St. Lawrence's Church,

Philadelphia, Pa.

2700 E♭
1300 G
800 B♭

Immac. Conception Church,

Brookville, Pa.

3150 D
1260 G
860 A
630 B

U. B. Church,

Scottdale, Pa.

1300 G
670 B
400 D

Roman Catholic Church,

Miles, Mich.

1700 F
800 A
400 C

St. Joseph's Church,

Hazelton, Pa.

1400 F♯
600 B
300 D♯

Evang. Luth. Zion Church,

Detroit, Mich.

1800 F
1300 G
950 A

Rom. Catholic Church,

Shamokin, Pa.

800 A
500 C♯
300 E

German R. C. Church,

Mahanoy City, Pa.

1250 G
730 B♭
420 D

St. Joseph's Church,

Easton, Pa.

2200 E
1800 F
1300 G

Prot. Episc. Church,

Ansonia, Conn.

3000 D
1500 F♯
750 A
300 D

Church of Our Lady,

Sayreville, N. Y.

800 A
400 C♯
200 E

St. Basil's Church,

New Brunswick.

900 A
600 B
450 C♯

St. Adelbert's Church,

Pittsburgh, Pa.

3100 D
1500 F♯
1250 G
850 A
400 D

St. Cassimir's Church,

Milwaukee, Wis.

4100 C
3000 D
2100 E

St. Francis' Church,

Milwaukee, Wis.

3678 C♯
2590 D♯
1726 F
1024 G♯
712 A♯

German Presbyt. Church,

Milwaukee, Wis.

2098 E
1020 G♯
650 B
300 E

St. Anthony's Church,

Troy Hill, Allegheny, Pa.

2500 E2
1250 G
750 B2

Glen Echo Chataqua,

Washington, D. C.

2100 E
1050 G2
650 B

St. Come Church,

Kennebec, P. Q.

2100 E
1550 F2
1050 G2

St. Leonard's Church,

Boston, Mass.

1250 G
650 B
350 D

Creek Catholic Church,

Mayfield, Pa.

1250 G
650 B
350 D

Assumption B. V. M. Church,

Avilla, Ind.

2100 E
1050 G2
650 B

St. Michael's Gr. Church,

Passaic, N. J.

1250 G
650 B
350 D

German Presbyterian Church,

Scranton, Pa.

2100 E
1050 G2
650 B
250 E

St. Francis de Sales Church,

Rogersville, N. B.

1250 G
650 B
350 D

St. Paul's R. C. Church,

Franklin Falls, N. H.

1550 F2
750 A2
450 C2

St. Mary's Greek Cath. Church

Trenton, N. J.

1050 A♭
750 B♭
500 C

St. Agatha's Church,

St. Agatha, Me.

1650 F♯
850 A
450 C♯
250 E

St. Mary's Church,

Genesee, Idaho.

1850 F
850 A
550 C

Methodist Epis. Church,

New York City.

1250 G
650 B
350 D
150 G

Polish Cath. Church,

Mill Creek, Pa.

2500 E♭
1250 G
750 B♭

St. Francis' Church,

New Haven, Conn.

3000 D
1550 F♯
850 A

Church of the Passionist Fathers,

Buenos Ayres, S. A.

2850 E♭
1250 G
750 B♭

Presbyterian Church,

Elkins, W. Va.

2100 E
1050 G♯
650 B

Annunciation Church,

Portsmouth, O.

3100 D
1550 F♯
850 A

Holy Rosary Church,

Buffalo, N. Y.

7500 A
4500 C
2200 E
900 A

All Saints' Church,

Chicago, Ill.

2100 E
1550 F♯
1050 G♯

St. Joseph's Monastery,

Baltimore, Md.

2500 E♭
1250 G
750 B♭

Trinity Lutheran Church,

Baltimore, Md.

1550 F♯
862 A
450 C♯

St. Mary's Church,

Homestead, Pa.

4200 C
2100 E
1250 G
550 C

St. Raphael's Cathedral,

Dubuque, Ia.

4200 C
2100 E
1250 G
550 C

Vance Memorial Church,

Wheeling, W. Va.

2100 E
850 A
650 B
500 C
375 D♯

Sacred Heart Church,

Rockwell, Iowa.

1550 F♯
850 A
450 C♯

All Saint's Chapel,

Norristown, Pa.

1850 F
750 B♭
550 C
350 D

St. Stephen's Church,

Bridgewater, S. Dak.

1850 F
850 A
500 C

German Lutheran Church,

Washington, D. C.

1250 G
650 B
350 D

Roman Catholic Church,

St. Alphonse de Thetford, P. Q.

2100 E
1050 G♯
650 B

Roman Catholic Church,

Miners Mills, Pa.

3100 D
1550 F♯
850 A

St. Joseph's R. C. Church,

Midland, Md.

2100 E
1050 G♯
650 B
200 E

Grand River Church,

Grand River, P. Q. Can.

1250 G
850 A
650 B

St. Victoire's Church,
Victoriaville, P. Q, Can.
2850 F♯
1850 F
1250 G

St. Calixte de Somerset Church,
Plessisville, P. Q.
3200 D
2100 E
1550 F♯

Zion German Luth. Church,
Wilmington, Del.
2100 E
1050 G♯
650 B

St. Thuribe Church,
St. Thuribe, P. Q.
850 A
650 B
485 C♯

St. Joseph's Church,
Allegheny, Pa.
3185 D
1650 F♯
850 A

St. Michael's Church,
Elizabeth, N. J.
3850 C♯
1875 E♯
1075 G♯
500 C♯

SS. Peter and Paul's Church,
Boonville, Mo.
1550 F♯
750 A♯
475 C♯

St. Peter's Church,
Jefferson, S. Dak.
2100 E
1075 G♯
650 B

St. Joseph's Church,
Biddeford, Me.
2100 E
1050 G♯
650 B

St. Andrew's R. C. Church,
Richmond, Ind.
3850 C♯
1875 E♯
1065 G♯
500 C♯

Memorial M. E. Church,
Berkley, Va.
1250 G
680 B
350 D

SS. Peter and Paul's Church,
Camden, N. J.
2100 E
1050 G♯
650 B

St. Rochus' Church,

Johnstown, Pa.

1050 A♭2
750 B♭2
500 C

Immac. Conception Church,

Allentown, Pa.

3850 C♯
1850 E♯
1050 G♯
500 C♯

St. Nicholas Croatin Church,

Allegheny, Pa.

2650 E♭2
1250 G
650 B♭2

St. Mary's Church,

McKeesport, Pa.

1250 G
650 B
350 D

St. Joseph's Church,

Ellinwood, Kans.

1250 G
650 B
350 D

Rev. Manuel Camano,

Puerto Madero, Buenos Ayres, S. A.

2800 E♭2
1250 G
750 B♭2

Sacred Heart Church,

Erie, Pa.

1550 F♯
850 A

St. Anthony's Church,

Ely, Minn.

2650 E♭2
1250 G

Monastery of St. John and St. Teresa.

New Orleans, La.

1552 F♯
850 A

St. Edmond's Church,

Ellenburgh, N. Y.

1050 A♭2
550 C

St. Urban's Church,

L'Amec, P. Q., Can.

1550 F♯
1050 G♯

St. John Cantius Church,

Wilno, Minn.

1550 F♯
500 C♯

St. Nicholas' Church,

McKeesport, Pa.

1050 A♭
500 C